

AMENDMENTS TO THE CLAIMS

1. (Currently Amended): A process for producing an aqueous pigment dispersion for ink-jet recording, comprising:

a first step of kneading (1) a styrene-acrylic resin with a styrene monomer unit of 50 to 90 mass %, and at least one unit selected from an acrylic monomer unit and a methacrylic monomer unit, having an acid value of 50 to 300 and a mass average molecular weight of 5,000 to 40,000, (2) a pigment, (3) a basic compound, and (4) a humectant to produce a solid colored kneaded product, and

a second step of dispersing the solid colored kneaded product in an aqueous medium comprising water or water and a humectant,

wherein the (3) basic compound is an alkali metal hydroxide, and the solid content percentage of the colored kneaded product in the first step is from 50 to 80 mass%.

2. (Currently Amended): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 1, wherein the average (2) pigment is at least one pigment selected from the group consisting of an azo yellow pigment, a quinacridone red pigment, a phthalocyanine indigo blue pigment, and a carbon black pigment.

3. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 2, wherein the mass percentage of the (1) styrene-acrylic resin, the (2) pigment, and the (4) humectant in the first step is (1) 10 to 100 parts, (2) 100 parts, and (4) 20 to 100 parts, respectively.

4. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 1, wherein the kneading in the first step is performed using a planetary kneading apparatus.

5. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 4, wherein the kneading temperature in the first step is not higher than a glass transition temperature of the (1) styrene-acrylic resin.

6. (Currently Amended): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 1, wherein the ~~(3) basic compound is an alkali metal hydroxide, and the~~ (4) humectant is a polyhydric alcohol having a boiling point of not less than 170°C.

7. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 1, wherein the compounding amount of the (3) basic compound is an amount corresponding to 0.8 to 1.2 times the amount for neutralizing all carboxylic groups of the (1) styrene-acrylic resin.

8. (Canceled).

9. (Previously Presented): An aqueous ink for ink-jet recording comprising the aqueous pigment dispersion as set forth in claim 1 which is used for ink-jet recording in a thermal ink-jet.

10-13. (Canceled).

14. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 2, wherein the kneading in the first step is performed using a planetary kneading apparatus.

15. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 14, wherein the kneading temperature in the first step is not higher than a glass transition temperature of the (1) styrene-acrylic resin.

16. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 3, wherein the kneading in the first step is performed using a planetary kneading apparatus.

17. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 16, wherein the kneading temperature in the first step is not higher than a glass transition temperature of the (1) styrene-acrylic resin.

18. (Currently Amended): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 2, wherein the ~~(3) basic compound is an alkali metal hydroxide,~~
~~and the~~ (4) humectant is a polyhydric alcohol having a boiling point of not less than 170°C.

19. (Currently Amended): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 3, wherein the ~~(3) basic compound is an alkali metal hydroxide,~~
~~and the~~ (4) humectant is a polyhydric alcohol having a boiling point of not less than 170°C.

20. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 2, wherein the compounding amount of the (3) basic compound is an amount corresponding to 0.8 to 1.2 times the amount for neutralizing all carboxylic groups of the (1) styrene-acrylic resin.

21. (Previously Presented): The process for producing an aqueous pigment dispersion for ink-jet recording as set forth in claim 3, wherein the compounding amount of the (3) basic compound is an amount corresponding to 0.8 to 1.2 times the amount for neutralizing all carboxylic groups of the (1) styrene-acrylic resin.

22. (Currently Amended): An aqueous ink for ink-jet recording comprising the aqueous pigment dispersion as set forth in claim 1, ~~wherein the pigment concentration is between not less than 35 mass% and not more than 60 mass%.~~

23. (Currently Amended): An aqueous ink for ink-jet recording comprising the aqueous pigment dispersion as set forth in claim 2, ~~wherein the pigment concentration is between not less than 35 mass% and not more than 60 mass%.~~

24. (Currently Amended): An aqueous ink for ink-jet recording comprising the aqueous pigment dispersion as set forth in claim 3, ~~wherein the pigment concentration is between not less than 35 mass% and not more than 60 mass%.~~

25. (Previously Presented): The aqueous ink for ink-jet recording as set forth in claim 22 which is used for ink-jet recording in a thermal ink-jet.